REMARKS

The Examiner rejected claim 13 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner indicated that "results of speculative computation" lack of antecedent basis in the claims. Applicant has amended the claims to overcome this rejection.

The Examiner rejected claims 21, 22 and 26 under 35 U.S.C. 102(e) as being anticipated by Lynch, U.S. Patent 6,119,094.

Claim 21 is directed to a method for determining availability of a seat for a mode of transportation. In the "Response to Applicant's Argument" the examiner contended that Applicant was to clarify "the definition of seat availability information in the claim as distinct from availability information or other travel information (e.g., complete solutions)." Applicant had previously amended claim 21 to further clarify the distinction between "seat availability information" and "other travel information." For instance, claim 21 was amended to recite "executing a first set of seat availability queries to a first source of seat availability information for a first set of instances of transportation." In claim 21 the first set of instances of transportation already exist and the purpose is to find whether the first set of instances of transportation will be made availability by running a set of availability queries to a source of seat availability information. Lynch teaches no such arrangement.

Claim 21 clearly defines distinctions between seat availability information and other travel information e.g., instances of transportation. Claim 21 is concerned with determining if a quality level of seat availability information is sufficient in order to determine a set of instances of transportation for which a seat is available. Claim 21 further requires executing a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the evaluating quality of the availability information to provide the set of instances of transportation. Lynch has no such teachings. Lynch describes "available travel arrangements", but as used by Lynch, it clearly refers to travel solutions and is not directed at finding quality of "seat availability information."

Rather, Lynch's system does not ask for, receive, or store seat availability information; Lynch's system concerns isolated travel solutions ("travel arrangements" as used by Lynch). While one can assume that Lynch's system receives "available travel solutions" from a CRS that only means that the CRS used its seat availability information when processing the isolated travel solutions to return to Lynch. Lynch does not access the seat availability information, nor does Lynch's system process seat availability from the information it receives, stores, or processes. Therefore, Lynch simply cannot anticipate a claim that processes seat availability information.

Lynch's pre-scheduled retrieval of inventory information does not include availability information. The data received is described in detail at Col. 6 lines 31-38:

> The data read from the computer reservation systems 24 includes inventory information, such as, for example, all flights between each city pair, airline carriers providing the flights, fare classes available on the flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate segments, and the identification of each segment of a flight as either domestic or international.

This data is schedule data and fare data but is not availability information. The "fare classes available on the flights" is a set of fares, not seat availability information. All other data named by Lynch are simple schedule data which gives information about the existence of flights but which does not contain seat availability information. Schedule and fare data are relatively static components of travel planning; whereas seat availability information is highly volatile data that changes on a continuous basis given supply and demand considerations.

Claim 22 distinguishes by reciting receiving the set of instances of transportation from a travel planning system in response to a user query and Claim 26 distinguishes by reciting that the sources of seat availability information generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

In the "Response to Applicant's Argument" the examiner contended that: "...the Applicant does not point out nor was the examiner able to find a specific, clear definition for the term (seat availability information) in the originally filed specification."

Applicant directs the examiner's attention to page 1 of the specification. Appellant describes:

> A travel planning system makes use of many classes of information including scheduling, faring, and availability data. The scheduling data describes where and when a passenger may travel; the faring data defines how much a given travel itinerary will cost; and the availability data describes the travel provider's willingness to sell the travel for the given cost. The availability data is often affected by the travel provider's capacity and their prior sales of similar products at similar prices, and is analogous to a report on remaining inventory.
>
> Sources of seat availability information include, but are not limited to, direct queries to external databases of seat availability information. Each source of availability information typically has associated fixed and marginal costs of obtaining information from that source, including computation, communication, time, and money. Further, each source may return answers with differing freshness, confidence, and validity properties.

Clearly, Applicant has provided a clear and distinct teaching of what is meant by the many classes of information used in airline travel planning, e.g., scheduling, faring, and availability data. Applicant described for example that availability data indicates the travel provider's willingness to sell the travel for the given cost and specifies that data as seat availability information. Seat availability is a well-known term used in the travel art, which would be very familiar to anyone who works with travel planning systems.

In the "Response to Applicant's Argument" the examiner contended that: "...The current claim language does not provide a definition ... and Applicant fails to point to and specific sections of the specification that define the term quality properties." Applicant directs the examiner's attention to original claim 9 and present claim 9 (reproduced below) and to, e.g.,

page 8 lines 24-27 of the specification (and generally through page 14). Appellant describes what is meant by "quality properties.":

> 9. (as amended) The travel planning system of claim 1 wherein the first source or a different one of the multiple sources of seat availability information is a source of predicted availability information that generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

The Examiner rejected claims 1-4, 11,13, 16, 23, 29, and 30 under 35 U.S.C. 103(a) as obvious over Lynch, U.S. Patent 6,119,094.

Applicants' claims 1-4, 9, 11-13, 16, 23, 29, and 30 are distinct from Lynch '094. The Examiner contends that Lynch discloses (at column 2, lines 60-65: col. 6, lines 11-17) a system to determine age of the availability data and determines how well the availability data meets certain parameters entered by the user and submits subsequent queries to one or more CRS's ... .

Claim 1 recites an availability process that can access seat availability information from multiple sources of seat availability information. Lynch neither describes nor suggests this feature. Lynch is not directed to the problem of how to determine seat availability on a mode of transportation, e.g., an airline flight. Rather, Lynch is directed to the problem of determining solutions to travel queries by finding flights and fares useable with the flights. (See Applicant's remarks of record.). In the "Response to Applicant's Argument" the examiner contended that:

> Applicant fails to appreciate the vast breath of the claim(s), as presently recited. For instance, the Applicant asserts that the system of Lynch '094 does not determine quality properties of the availability data or the reliability of the data source. However, the Lynch reference clearly states that the system determines the age of the availability data and also determines how well the availability data meet the certain parameters entered by the user ... In other words the system determines the age and fitness or

usefulness of the availability data – two qualities of the availability data.

The examiner fails to properly construe the teachings of Lynch. Lynch does not suggest an availability process that ... uses results from a first source of the multiple sources of seat availability information ... to determine a set of instances of transportation ... determines quality properties of the availability information from the first source of seat availability information; and determines, based on the quality properties, whether the first source of seat availability information is reliable, and if the results are not reliable, the availability process executes a second set of seat availability queries to the first source or a different one of the multiple sources of seat availability information based on the outcome of determining quality properties, to provide a second set of instances of transportation for which a seat is available.

Lynch does not address the problem of determining seat availability and fails to suggest determination of the quality of the seat availability information. What Lynch describes by references to "available" is not determining seat availability information, but existence of flight/fare data that can be used to form priced itineraries. However, the priced itineraries that Lynch retrieves do not contain the seat availability information that would be needed to answer availability queries.

Applicants' claims 2-14 add additionally distinct features.

Claim 16 distinguishes by reciting instructions to send the second set of seat availability queries to a different higher quality source of seat availability information if the results from the first source are low quality. While Lynch could send a request to a different CRS (and presumably a different RMS) the request would be for different availability information since different sources of the seat availability that can be used to give information for the same availability query is not present in Lynch.

Claim 23 depends from claim 21 and further distinguishes by reciting, sending seat availability queries to a different source of seat availability information if the results from the first source do not have a sufficient level of quality. Lynch does not test the quality of "seat availability information" and does not teach directing queries to a different source if the quality

of the results is low. To the extent that the teachings regarding querying a computer reservation system are relevant, it is noted that Lynch still does not teach "sending seat availability queries to a different source of seat availability information if the results from the first source do not have a sufficient level of quality" but rather repopulates its own databases with the inventory data which as Lynch describes at Col. 6 lines 22-38 as:

> If the predetermined time has elapsed, at block 106, system 10, under the control of the inventory update sub-module, reads data from one or more computer reservation systems 24. If system 10 is connected to more than one computer reservation system 24, data can be read from each computer reservation system sequentially so that only one computer reservation system 24 is accessed at any given moment. Alternatively, system 10 can be configured to read data from a plurality of computer reservation systems simultaneously. The data read from the computer reservation systems 24 includes inventory information, such as, for example, all flights between each city pair, airline carriers providing the flights, fare classes available on the flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate segments, and the identification of each segment of a flight as either domestic or international.

Clearly if Lynch teaches to update all inventory data as "for example, all flights between each city pair, airline carriers providing the flights, fare classes available on the flights" and so forth, Lynch cannot suggest the features of these claims since the data are not instances of transportation. Lynch merely reloads all data in the inventory data structure based on a lapse of a predetermined time period. The contents of the answers returned by the CRS do not change Lynch's schedule of future queries to be posed to the CRS, e.g., there is no determination of whether the data is of low quality or not. Rather, after setting the single time update period, the schedule of queries to the CRS in Lynch is completely and immutably predetermined.

Thus, given that the schedule of queries is completely and immutably predetermined before any of the queries are made, then it is inherent that the queries made by Lynch are not determined by a quality or property of the answers received for those queries. In contrast, claim

23 recites sending seat availability queries to a different source of seat availability information if the results from the first source do not have a sufficient level of quality.

The Examiner rejected claims 5-8, 10, 18, 20, 25 and 27 under 35 U.S.C. 103(a) as being unpatentable over Lynch et al., U.S. Patent 6,119,094 in view of Lynch et al., U.S. Patent 5,839,114.

These claims are distinguished from Lynch '094 and '114, for instance, since neither Lynch '094 nor Lynch '114 separately or in combination suggests the features of Applicants' claim 1, as discussed above. Moreover, Lynch '114 neither describes nor suggests that different sources of predicted seat availability information have differing fixed and modular costs associated with obtaining information, as recited in claim 5. Similarly, claims 6-8, 10, 18, 20, 25 and 27 are distinct over Lynch '094 and Lynch '114.

The Examiner rejected claims 9, 17 and 24 under 35 U.S.C. 103(a), as being unpatentable over Lynch '094 in view of Walker, U.S. Patent 5,897,620.

Claim 9 distinguishes by reciting that the source of seat availability information is a source of predicted availability information that generates replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

Walker does not teach prediction of seat availability information. Rather, Walker mentions an RMS (revenue management system) and uses that system to provide seat availability data. A RMS system is a system that supplies actual seat availability information, typically in response to a query posed to the system. In Applicant's claim 9, the claimed source that predicts availability information forms a prediction of how an RMS system will respond to a query. That is, Claim 9 uses a source of predicted availability information as a way to predict how the RMS would answer a given query for seat availability information. Hence, claims 9, 17, and 24 further distinguish over Lynch and Walker.

A RMS system forecasts demand in the process of setting inventory levels. However, predicting demand is entirely distinct problem from predicting availability information. Demand is a property of the traveling public while availability information is a property of an airline's

analysts and its computer system. These are different concepts and predicting one is completely different from predicting the other.

The Examiner rejected claims 12 and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Hornick, U.S. Patent 5,270,921.

Claim 12 is directed to the situation where low-quality answers are ... guessed or computed internal to the travel planning process. This is not described by the references.

The Examiner rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Slotznick, U.S. Patent 5,983,200.

Claim 14 is distinct from Lynch taken separately or in combination with Slotznick for the reasons mentioned in conjunction with claim 1. The Examiner admits that Lynch does not suggest this feature and Applicant contends that Slotznick neither describes nor suggests an intelligent client for processing and integrating scheduling and fare information and availability data in a travel planning system.

The Examiner rejected claim 28 under 35 U.S.C. 103(a) over Lynch in view of Official Notice.

The Examiner considers that confidence levels are commonly used in "mathematic/probability calculations." The Examiner considered it to be obvious to combine these "to monitor the accuracy and reliability of the obtained data and enable users to adjust the intervals to increase or decrease number of candidate pools created to further assist the system in identifying a plurality of low cost travel options..."

Clearly, this motivation is insufficient to combine the so-called Official Notice teachings with the teachings of Lynch. Lynch teaches to retrieve data from CRS's. Hence, the data is what it is. One could not use confidence levels to improve the accuracy of the obtained data as the Examiner argues. Lynch does not supply any teachings by which one could select which actual queries to make in order to increase the number of available solutions found or to increase the likelihood that availability of desirable solutions has been verified with high confidence.

Attorney's Docket No.: 09765-017001

Enclosed is a $420 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 5/6/04

Denis G. Maloney
Reg. No. 29,670

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

20803665.doc